

76, 77, 79 to 83, 108, and 109 stand rejected. Claims 6, 9 to 13, 32 to 61, and 84 to 106 stand withdrawn from consideration.

**II. Rejections Under 35 U.S.C. § 103(a)**

**Over Jones in view of Rondeau**

The Office rejects claims 1 to 5, 7, 8, 14 to 19, 24, 31, 62 to 68, 70 to 74, 76, 77, 79 to 83, 108, and 109 as being obvious over the teachings of *Jones* (U.S. Pat. No. 6,106,578) in view of those of *Rondeau* (U.S. Pat. No. 5,879,412) for the reasons found on pages 4 to 6, 8, and 9 of the outstanding Office Action. At least because the teachings of *Jones* cannot be properly modified or combined with those of *Rondeau* for lack of the required motivation, Applicants respectfully submit that the Office has failed to meet its burden of establishing a *prima facie* case of obviousness.

The Federal Circuit rigorously requires a showing of a suggestion or motivation to combine the teachings of prior art references. See, e.g., *In re Dembiczak*, 50 USPQ.2d 1614 (Fed. Cir. 1999). Combining prior art references without evidence of such a suggestion or motivation simply takes the inventor's specification as a blueprint for piecing together the prior art to defeat patentability, i.e., the essence of hindsight. *Dembiczak*, 50 USPQ.2d at 1617. This is why the Federal Circuit placed the burden on the Office to present "clear and **particular**" evidence showing motivation to combine. *Id.* at 1617.

*Jones* does not suggest adding any **particular cationic** dyes, let alone the **particular** dyes of *Rondeau*, to the compositions of *Jones*. *Jones* describes a composition comprising: "a) one or more hair dyeing agents; b) at least 0.1 weight

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percent of at least one hydrophobically modified nonionic polymer, based on the total weight of the hair dye composition, c) at least 0.1 weight percent of at least one associative agent, based on the total weight of the hair dye composition; and d) water." (col. 2, lines 61-67). *Jones* teaches a hydrophobically modified nonionic polymer (col. 4, line 28), but, as the Office admits, does not teach at least one cationic direct dye as recited in the claims (Office Action of at 5, line 4).

As a result, although *Jones* states its dyeing agents can include "azo" dyes (col. 10, line 28), *Jones* does not suggest any **particular cationic** dyeing agents, like cationic azo and basic dyes. In other words, at least some azo and basic dyes are not cationic. So, even though some cationic direct dyes of *Rondeau* fall within the vast scope of "azo" dyes, nothing in *Jones's* term "azo" dye suggest any **particular cationic dye** of *Rondeau*. Thus, the teachings of *Jones* cannot support the Office's burden of establishing its *prima facie* case of obviousness.

Additionally, *Rondeau* does not suggest adding cationic direct dyes to any **particular** "at least one hydrophobically modified nonionic polymer" of *Jones* to the compositions of *Jones*. *Rondeau* describes a composition comprising, among other things, "at least one cationic direct dye of formula I" (col. 2, lines 1-8). *Rondeau* broadly suggest the possibility that its "compositions . . . can also contain various adjuvants used conventionally in compositions for dyeing the hair, such as . . . anionic, cationic, nonionic or amphoteric polymers or mixtures thereof, [and] inorganic or organic thickeners . . . ." (col. 10, lines 39-47).

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Although *Rondeau's* statement includes "various adjuvants," it does not suggest any **particular** "at least one hydrophobically modified nonionic polymer" of *Jones*. In other words, at least some of the "various adjuvants" broadly suggested as mere possibilities are not the **particular** "hydrophobically modified nonionic polymer[s]" of *Jones*. So, even though some of the "various adjuvants" of *Rondeau* may fall within the scope of a broad suggestion of possibilities, there is nothing to suggest any **particular** "at least one hydrophobically modified nonionic polymer" of *Jones*. Thus, neither *Jones* nor *Rondeau* suggests the particular combination proposed by the Office.

The Office argues "[t]his **generic** teaching [of hair dyeing agents] allows for the addition of **any** hair dye to the composition, which comprises the claimed polymers" (Office Action at 8, line 13-15) (emphasis added). The Office's motivation, however, is not **particular** to its proposed combination. To the contrary, **generic** teachings allowing for the addition of **any** hair dye to the composition of *Jones* show a lack of the required "clear and particular" evidence of motivation for the proposed combination.

The Office argues that "[i]t is *prima facie* obvious to combine two compositions each taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose" (Office Action at 9, lines 3-6) (citing *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980), a copy of which is enclosed for the Office's consideration and convenience). Even though Applicants are unsure which compositions the Office had in mind, Applicants

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respectfully submit that using the reasoning of *Kerkhoven* for this application would not be proper.

More specifically, in *Kerkhoven*, applicant claimed the invention as a process for preparing a detergent composition comprising **merely mixing** a pair of detergents. *Kerkhoven*, 205 USPQ at 1070. In other words, the process formed a combination of detergent compositions. The Office concluded that applicant's claims require no more than the **mere mixing** to form a combination of two conventional detergent compositions, each taught for the same purpose. *Id.* at 1071. The predecessor court to the Federal Circuit agreed, because the prior art contained the two conventional detergent compositions which may be **merely mixed** to satisfy the claimed process. *Id.* at 1072.

In this case, the facts are different and make applying the reasoning of *Kerkhoven* improper. While the method of *Kerkhoven* **merely mixed** two detergents, the composition of *Jones* is different. Specifically, *Jones*'s composition contains a hydrophobically modified nonionic polymer ("HPN") and an associative agent. The HPN interacts or associates with itself or other components in hair dye compositions (col. 4, lines 18-21). The associative agent interacts with the HPN (col. 8, lines 9-11). As a result, the composition of *Jones*, unlike that of *Kerkhoven*, is not a mere mixture. Thus, the Office incorrectly used the reasoning of *Kerkhoven* is not applicable to the composition of *Jones*.

In view of the above remarks, Applicants respectfully submit that the Office has not met its burden of establishing a *prima facie* case of obviousness for lack of the

required motivation to combine and modify the teachings of *Jones* and *Rondeau*. Even though the references cited by the Office may show, at best, the proposed combination was obvious to try, obvious to try cannot support the Office's burden to establish a *prima facie* case of obviousness. *M.P.E.P.* § 2145 X B; *In re O'Farrell*, 7 USPQ2d 1673 (Fed. Cir. 1988). Thus, Applicants respectfully request that this rejection be withdrawn.

**Over de la Mettrie in view of Rondeau**

The Office rejects claims 1 to 5, 7, 8, 14 to 31, 62 to 68, 70 to 74, 76, 77, 79 to 83, 108, and 109 as being obvious over the teachings of *de la Mettrie* (U.S. Pat. No. 6,010,542) in view of those of *Rondeau* for the reasons found on pages 6 to 8, 9, and 10 of the outstanding Office Action. At least because the teachings of *de la Mettrie* cannot be properly modified or combined with those of *Rondeau* for lack of the required "clear and particular" evidence showing motivation to combine, Applicants respectfully submit that the Office has failed to meet its burden of establishing a *prima facie* case of obviousness.

*de la Mettrie* does not suggest adding any **particular cationic** dyes, let alone the **particular** dyes of *Rondeau*, to the compositions of *de la Mettrie*. *de la Mettrie* describes a composition comprising: "a composition for the oxidation dyeing of keratin fibers . . . comprising at least one oxidation dye precursor and optionally one or more couplers and at least one nonionic amphiphilic polymer containing at least one fatty chain and at least one hydrophilic unit" (col. 1, lines 5-10). *de la Mettrie* states its compositions may comprise direct dyes like azo dyes (col. 7, lines 29-33).

*de la Mettrie*, as the Office admits, does not teach the cationic direct dyes as recited, e.g., in present claim 1.

As a result, although *de la Mettrie* broadly suggest the possibility that its dyeing agents may include "azo" dyes, *de la Mettrie* does not suggest any **particular cationic** azo dyes. In other words, at least some azo and basic dyes are not cationic. So, even though some cationic direct dyes of *Rondeau* fall within the vast scope of "azo" dyes, nothing in *de la Mettrie*'s term "azo" dye suggests any **particular cationic** azo dye of *Rondeau*.

Additionally, *Rondeau* does not suggest adding cationic direct dyes to any **particular** "at least one nonionic amphiphilic polymer," let alone the **particular** "at least one nonionic amphiphilic polymer" of *de la Mettrie*, to the compositions of *de la Mettrie*. *Rondeau*'s broad suggestion regarding "various adjuvants," does not suggest any **particular** "at least one nonionic amphiphilic polymer" of *de la Mettrie*. In other words, at least some of the "various adjuvants" are not the **particular** "nonionic amphiphilic polymer[s]" of *de la Mettrie*. So, even though some of the "various adjuvants" of *Rondeau* may fall within the scope of a broad suggestion of possibilities there is nothing to suggest any **particular** "at least one nonionic amphiphilic polymer," let alone the **particular** "at least one nonionic amphiphilic polymer" of *de la Mettrie*. Thus, neither *de la Mettrie* nor *Rondeau* suggests the particular combination proposed by the Office.

In view of the above remarks, Applicants respectfully submit that the Office has not met its burden of establishing a *prima facie* case of obviousness for lack of the

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required motivation to combine and modify the teachings of *de la Mettrie* and *Rondeau*. Even though the references cited by the Office may show, at best, the proposed combination was obvious to try, obvious to try cannot support the Office's burden to establish a *prima facie* case of obviousness. *M.P.E.P.* § 2145 X B; *In re O'Farrell*, 7 USPQ2d 1673 (Fed. Cir. 1988). Thus, Applicants respectfully request that this rejection be withdrawn.

### CONCLUSION


In view of the foregoing amendments and remarks, Applicants respectfully request reconsideration and reexamination of the pending claims and the timely allowance of the pending claims.

If any matters can be resolved by an interview over the telephone, please contact Sean A. Passino at (202) 408-6065.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
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By:   
Sean A. Passino  
Reg. No. 45,943

Dated: September 21, 2001

Enclosures: *In re Kerkhoven*, 205 USPQ 1069 (CCPA 1980).

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In re Dembiczak (CA FC) 50 USPQ2d 1614

**In re Dembiczak**

**U.S. Court of Appeals Federal Circuit  
50 USPQ2d 1614**

**Decided April 28, 1999  
No. 98-1498**

**Headnotes**

**PATENTS**

**1. Patentability/Validity -- Obviousness -- Combining references (§ 115.0905)**

Decision rejecting claims in utility application as obvious over combination of prior art references must be reversed, since obviousness analysis in decision is limited to discussion of ways that multiple references can be combined to read on claimed invention, but does not particularly identify any suggestion, teaching, or motivation to combine references, and does not include specific or inferential findings concerning identification of relevant art, level of ordinary skill in art, nature of problem to be solved, or any other factual findings that might support proper obviousness analysis.

**2. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)**

Obviousness-type double patenting may be found between design and utility patents in rare cases, but such rejection is appropriate only if claims of two patents cross-read, meaning that subject matter of claims of patent sought to be invalidated would have been obvious from subject matter of claims of other patent, and vice-versa.



### **3. Patentability/Validity -- Anticipation -- Double patenting (§ 115.0708)**

Applicants' design patents for bag with jack-o'-lantern face would not have been obvious variants of their pending utility claims directed to trash bag decorated to resemble Halloween pumpkin when filled with trash or leaves, since textual description of "facial indicia" on bag found in claims of utility patent application cannot constitute design reference that is "basically the same as" specific designs claimed in applicants' patentably distinct design patents.

### **Case History and Disposition:**

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Appeal from the U.S. Patent and Trademark Office, Board of Patent Appeals and Interferences.

Application of Anita Dembiczak and Benson Zinbarg for utility patent (application serial no. 08/427,732). From decision sustaining rejections of claims in application, applicants appeal. Reversed.

### **Attorneys:**

David P. Gordon and Thomas A. Gallagher, Stamford, Conn., for appellants.

John M. Whealan, associate solicitor, Albin F. Drost, acting solicitor, and David R. Nicholson, associate solicitor, Office of the Solicitor, Arlington, Va., for appellee.

### **Judge:**

Before Mayer, chief judge, and Michel and Clevenger, circuit judges.

### **Opinion Text**

### **Opinion By:**

Clevenger, J.

Anita Dembiczak and Benson Zinbarg appeal the rejection, upheld by the Board of Patent Appeals and Interferences, of all pending claims in their Application No. 08/427,732. *See Ex Parte Dembiczak*, No. 96-2648, slip op. at 43 (May 14, 1998). Because the Board erred in sustaining rejections of the pending claims as obvious under 35 U.S.C. Section 103(a) (Supp. 1998), and for obviousness-type double patenting, we reverse.

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I

The invention at issue in this case is, generally speaking, a large trash bag made of orange plastic and decorated with lines and facial features, allowing the bag, when filled with trash or leaves, to resemble a Halloween-style pumpkin, or jack-o'-lantern. As the inventors, Anita Dembiczak and Benson Zinbarg (collectively, "Dembiczak") note, the invention solves the long-standing problem of unsightly trash bags placed on the curbs of America, and, by fortuitous happenstance, allows users to express their whimsical or festive nature while properly storing garbage, leaves, or other household debris awaiting collection. Embodiments of the invention--sold under a variety of names, including Giant Stuff-A-Pumpkin(trade mark), Funkins, Jack Sak(trade mark), and Bag-O-Fun(trade mark)--have undisputedly been well-received by consumers, who bought more than seven million units in 1990 alone. Indeed, in 1990, the popularity of the pumpkin bags engendered a rash of thefts around Houston, Texas, leading some owners to resort to preventative measures, such as greasing the bags with petroleum jelly and tying them to trees. *See* R. Piller, "Halloween Hopes Die on the Vine," *Hous. Chron.*, Oct. 19, 1990, at 13A.

The road to profits has proved much easier than the path to patentability, however. In July 1989, Dembiczak filed a utility patent application generally directed to the pumpkin bags. In a February 1992 appeal, the Board of Patent Appeals and Interferences ("the Board") reversed the Examiner's rejection, but entered new grounds for rejection. Dembiczak elected to continue prosecution, filing a continuation application to address the new grounds for rejection. Thereafter, the invention made a second appearance before the Board, in April 1993, when the Board both sustained the Examiner's rejection and again entered new grounds for rejection. Again, a continuation application was filed (the instant application). And again the Examiner's rejection was appealed to the Board, which sustained the rejection in a May 14, 1998, decision. *See Dembiczak*, slip op. at 43.

A

The patent application at issue includes claims directed to various embodiments of the pumpkin bag. Claims 37, 49, 51, 52, 58 through 64, 66 through 69, and 72 through 81 are at issue in this appeal. Though the claims vary, independent claim 74 is perhaps most representative:

74. A decorative bag for use by a user with trash filling material, the bag simulating the general outer appearance of an outer surface of a pumpkin having facial indicia thereon, comprising:

a flexible waterproof plastic trash or leaf bag having

an outer surface which is premanufactured orange in color for the user to simulate the general appearance of the outer skin of a pumpkin, and having

facial indicia including at least two of an eye, a nose and a mouth on the orange color outer surface for forming a face pattern on said orange color outer surface to simulate the general outer appearance of a decorative pumpkin with a face thereon,

said trash or leaf bag having first and second opposite ends, at least said second end having an opening extending substantially across the full width of said trash or leaf bag for receiving the trash filling material,

wherein when said trash or leaf bag is filled with trash filling material and closed, said trash or leaf bag takes the form and general appearance of a pumpkin with a face thereon.

All of the independent claims on appeal, namely 37, 52, 72, and 74, contain limitations that the bag must be "premanufactured orange in color," have "facial indicia," have openings suitable for filling with trash material, and that when filled, the bag must have a generally rounded appearance, like a pumpkin. Independent claims 37, 52, and 72 add the limitation that the bag's height must at least 36 inches. Claim 72 requires that the bag be made of a "weatherproof material," and claim 74, as shown above, requires that the bag be "waterproof." Claim 52 recites a "method of assembling" a bag with the general characteristics of apparatus claim 37.

## B

The prior art cited by the Board includes:

(1) pages 24-25 of a book entitled "A Handbook for Teachers of Elementary Art," by Holiday Art Activities ("Holiday"), describing how to teach children to make a "Crepe Paper Jack-O-Lantern" out of a strip of orange crepe paper, construction paper cut-outs in the shape of facial features, and "wadded newspapers" as filling;

(2) page 73 of a book entitled "The Everything Book for Teachers of Young Children,"

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by Martha Shapiro and Valerie Indenbaum ("Shapiro"), describing a method of making a "paper bag pumpkin" by stuffing a bag with newspapers, painting it orange, and then painting on facial features with black paint;

(3) U.S. Patent No. 3,349,991 to Leonard Kessler, entitled "Flexible Container" ("Kessler"), describing a bag apparatus wherein the bag closure is accomplished by the use of folds or

gussets in the bag material;

(4) U.S. Patent No. Des. 310,023, issued August 21, 1990 to Dembiczak ("Dembiczak '023"), a design patent depicting a bag with a jack-o'-lantern face;

(5) U.S. Patent No. Des. 317,254, issued June 4, 1991 to Dembiczak ("Dembiczak '254"), a design patent depicting a bag with a jack-o'-lantern face; and,

(6) Prior art "conventional" plastic lawn or trash bags ("the conventional trash bags").

Using this art, the Board affirmed the Examiner's final rejection of all the independent claims (37, 52, 72, 74) under 35 U.S.C. Section 103, holding that they would have been obvious in light of the conventional trash bags in view of the Holiday and Shapiro references. The Board determined that, in its view of the prior art, "the only difference between the invention presently defined in the independent claims on appeal and the orange plastic trash bags of the prior art and the use of such bags resides in the application of the facial indicia to the outer surface of the bag." *Dembiczak*, slip op. at 18. The Board further held that the missing facial indicia elements were provided by the Holiday and Shapiro references' description of painting jack-o'-lantern faces on paper bags. *See id.* at 18-19. Dependent claims 49 and 79, which include a "gussets" limitation, were considered obvious under similar reasoning, except that the references cited against them included Kessler. *See id.* at 7.

The Board also affirmed the Examiner's obviousness-type double patenting rejection of all the independent claims in light of the two Dembiczak design patents ('023 and '254) and Holiday. *See id.* at 12. The Board held that the design patents depict a generally rounded bag with jack-o'-lantern facial indicia, and that the Holiday reference supplies the missing limitations, such as the "thin, flexible material" of manufacture, the orange color, the initially-open upper end, and the trash filling material. The Board also stated that the various limitations of the dependent claims-- e.g., color, the inclusion of leaves as stuffing, and the dimensions--would all be obvious variations of the depictions in the Dembiczak design patents. *See id.* at 8-9. In addition, using a two-way test for obviousness-type double patenting, the Board held that the claims of the Dembiczak design patents "do not exclude" the additional structural limitations of the pending utility claims, and thus the design patents were merely obvious variations of the subject matter disclosed in the utility claims. *See id.* at 11. The Board further upheld, on similar grounds and with the inclusion of the Kessler reference, the obviousness-type double patenting rejection of dependent claim 49. *See id.* at 12.

This appeal followed, vesting this court with jurisdiction pursuant to 28 U.S.C. Section 1295(a)(4)(A) (1994).

## II

A claimed invention is unpatentable if the differences between it and the prior art "are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art." 35 U.S.C. Section 103(a) (Supp. 1998); *see Graham v. John Deere Co.*, 383 U.S. 1, 14, 148 USPQ 459, 465 (1966). The ultimate

determination of whether an invention is or is not obvious is a legal conclusion based on underlying factual inquiries including: (1) the scope and content of the prior art; (2) the level of ordinary skill in the prior art; (3) the differences between the claimed invention and the prior art; and (4) objective evidence of nonobviousness. See *Graham*, 383 U.S. at 17-18, 148 USPQ at 467; *Miles Labs, Inc., Inc. v. Shandon Inc.*, 997 F.2d 870, 877, 27 USPQ2d 1123, 1128 (Fed. Cir. 1993). We therefore review the ultimate determination of obviousness without deference to the Board, while examining any factual findings for clear error. See, e.g., *In re Zurko*, 142 F.3d 1447, 1459, 46 USPQ2d 1691, 1700 (Fed. Cir.) (en banc), cert. granted, 119 S. Ct. 401 (1998).

## A

Our analysis begins in the text of section 103 quoted above, with the phrase "at the time the invention was made." For it is this phrase that guards against entry into the "tempting but forbidden zone of hindsight," see *Loctite Corp. v. Ultraseal Ltd.*, 781 F.2d 861, 873, 228 USPQ 90, 98 (Fed. Cir. 1985), overruled on other grounds by *Nobelpharma AB v. Implant Innovations, Inc.*, 141 F.3d 1059, 46 USPQ2d 1097 (Fed. Cir. 1998),

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when analyzing the patentability of claims pursuant to that section. Measuring a claimed invention against the standard established by section 103 requires the oft-difficult but critical step of casting the mind back to the time of invention, to consider the thinking of one of ordinary skill in the art, guided only by the prior art references and the then-accepted wisdom in the field. See, e.g., *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1553, 220 USPQ 303, 313 (Fed. Cir. 1983). Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one "to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher." *Id.*

Our case law makes clear that the best defense against the subtle but powerful attraction of a hindsight-based obviousness analysis is rigorous application of the requirement for a showing of the teaching or motivation to combine prior art references. See, e.g., *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998) (describing "teaching or suggestion or motivation [to combine]" as an "essential evidentiary component of an obviousness holding"); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) ("the Board must identify specifically . . . the reasons one of ordinary skill in the art would have been motivated to select the references and combine them"); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783 (Fed. Cir. 1992) (examiner can satisfy burden of obviousness in light of combination "only by showing some objective teaching [leading to the combination]"); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (evidence of teaching or suggestion "essential" to avoid hindsight); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 297, 227 USPQ 657, 667 (Fed. Cir. 1985) (district court's conclusion of obviousness was error when it "did not elucidate any factual teachings,

suggestions or incentives from this prior art that showed the propriety of combination"). See also *Graham*, 383 U.S. at 18, 148 USPQ at 467 ("strict observance" of factual predicates to obviousness conclusion required). Combining prior art references without evidence of such a suggestion, teaching, or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability--the essence of hindsight. See, e.g., *Interconnect Planning Corp. v. Feil*, 774 F.2d 1132, 1138, 227 USPQ 543, 547 (Fed. Cir. 1985) ("The invention must be viewed not with the blueprint drawn by the inventor, but in the state of the art that existed at the time."). In this case, the Board fell into the hindsight trap.

We have noted that evidence of a suggestion, teaching, or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, see *Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc.*, 75 F.3d 1568, 1573, 37 USPQ2d 1626, 1630 (Fed. Cir. 1996), *Para-Ordinance Mfg. v. SGS Imports Intern., Inc.*, 73 F.3d 1085, 1088, 37 USPQ2d 1237, 1240 (Fed. Cir. 1995), although "the suggestion more often comes from the teachings of the pertinent references," *Rouffet*, 149 F.3d at 1355, 47 USPQ2d at 1456. The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular. See, e.g., *C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232. Broad conclusory statements regarding the teaching of multiple references, standing alone, are not "evidence." E.g., *McElmurry v. Arkansas Power & Light Co.*, 995 F.2d 1576, 1578, 27 USPQ2d 1129, 1131 (Fed. Cir. 1993) ("Mere denials and conclusory statements, however, are not sufficient to establish a genuine issue of material fact."); *In re Sichert*, 566 F.2d 1154, 1164, 196 USPQ 209, 217 (CCPA 1977) ("The examiner's conclusory statement that the specification does not teach the best mode of using the invention is unaccompanied by evidence or reasoning and is entirely inadequate to support the rejection."). In addition to demonstrating the propriety of an obviousness analysis, particular factual findings regarding the suggestion, teaching, or motivation to combine serve a number of important purposes, including: (1) clear explication of the position adopted by the Examiner and the Board; (2) identification of the factual disputes, if any, between the applicant and the Board; and (3) facilitation of review on appeal. Here, however, the Board did not make particular findings regarding the locus of the suggestion, teaching, or motivation to combine the prior art references.

[1] All the obviousness rejections affirmed by the Board resulted from a combination of prior art references, e.g., the conventional trash or yard bags, and the Holiday and Shapiro publications teaching the construction of decorated paper bags. See *Dembiczak*, slip op. at 6-7. To justify this combination, the Board simply stated that "the Holiday and Shapiro references would have

suggested the application of . . . facial indicia to the prior art plastic trash bags." *Id.* at 18-19. However, rather than pointing to specific information in Holiday or Shapiro that suggest the combination with the conventional bags, the Board instead described in detail the similarities between the Holiday and Shapiro references and the claimed invention, noting that one reference

or the other--in combination with each other and the conventional trash bags--described all of the limitations of the pending claims. See *id.* at 18-28. Nowhere does the Board particularly identify any suggestion, teaching, or motivation to combine the children's art references (Holiday and Shapiro) with the conventional trash or lawn bag references, nor does the Board make specific--or even inferential--findings concerning the identification of the relevant art, the level of ordinary skill in the art, the nature of the problem to be solved, or any other factual findings that might serve to support a proper obviousness analysis. See, e.g., *Pro-Mold & Tool*, 75 F.3d at 1573, 37 USPQ2d at 1630.

To the contrary, the obviousness analysis in the Board's decision is limited to a discussion of the ways that the multiple prior art references can be combined to read on the claimed invention. For example, the Board finds that the Holiday bag reference depicts a "premanufactured orange" bag material, see *Dembiczak*, slip op. at 21, finds that Shapiro teaches the use of paper bags in various sizes, including "large", see *id.* at 22-23, and concludes that the substitution of orange plastic for the crepe paper of Holiday and the paper bags of Shapiro would be an obvious design choice, see *id.* at 24. Yet this reference-by-reference, limitation-by-limitation analysis fails to demonstrate how the Holiday and Shapiro references teach or suggest their combination with the conventional trash or lawn bags to yield the claimed invention. See *Rouffet*, 149 F.3d at 1357, 47 USPQ2d at 1459 (noting Board's failure to explain, when analyzing the prior art, "what specific understanding or technical principle . . . would have suggested the combination"). Because we do not discern any finding by the Board that there was a suggestion, teaching, or motivation to combine the prior art references cited against the pending claims, the Board's conclusion of obviousness, as a matter of law, cannot stand. See *C.R. Bard*, 157 F.3d at 1352, 48 USPQ2d at 1232; *Rouffet*, 149 F.3d at 1359, 47 USPQ2d at 1459; *Fritch*, 972 F.2d at 1265, 23 USPQ2d at 1783; *Fine*, 837 F.2d at 1075, 5 USPQ2d at 1600; *Ashland Oil*, 776 F.2d at 297, 227 USPQ at 667.

## B

The Commissioner of Patents and Trademarks ("Commissioner") attempts to justify the Board's decision on grounds different from that relied upon by the Board, arguing that one of ordinary skill in the art would have been motivated to combine the references. Of course, in order to do so, the Commissioner must do what the Board did not do below: make specific findings of fact regarding the level of skill in the art ("a designer and manufacturer of trash and leaf bags, particularly one specializing in the ornamental and graphic design of such bags"), *Resp't Br.* at 14, the relationship between the fields of conventional trash bags and children's crafts, respectively ("[t]he artisan would also have been well aware of the ancillary, corollary, and atypical uses of 'trash' bags such as their application in hobby and art projects"), *Resp't Br.* at 15, and the particular features of the prior art references that would motivate one of ordinary skill in a particular art to select elements disclosed in references from a wholly different field ("a designer and manufacturer of trash and leaf bags would have recognized the paper bag in Shapiro to be a trash bag and therefore would have been motivated to combine it with the admitted prior art plastic trash and leaf bags to arrive at the claimed invention"), *Resp't Br.* at 15. The Commissioner also appears to cite additional references in support of his obviousness

analysis, noting that at least two design patents (in the record but not cited against the presently pending claims) teach the placement of "graphical information, including text, designs, and even facial indicia, to colored bags." *Resp't Br.* at 16. This new analysis, apparently cut from whole cloth in view of appeal, does little more than highlight the shortcomings of the decision below, and we decline to consider it. See, e.g., *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949, 1951 (Fed. Cir. 1999) ("We decline to consider [the Commissioner's] newly-minted theory as an alternative ground for upholding the agency's decision."); *In re Soni*, 54 F.3d 746, 751, 34 USPQ2d 1684, 1688 (Fed. Cir. 1995); *In re Hounsfield*, 699 F.2d 1320, 1324, 216 USPQ 1045, 1049 (Fed. Cir. 1983) (rejecting an "attempt [ ] by the Commissioner to apply a new rationale to support the rejection."); see also 35 U.S.C. Section 144 (1994) (an appeal to the Federal Circuit "is taken on the record before The Patent and Trademark Office"). Because the Board has not established a *prima facie* case of obviousness, see *In re Bell*, 991 F.2d 781,

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783, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) ("The PTO bears the burden of establishing a case of *prima facie* obviousness."), we therefore reverse the obviousness rejections, and have no need to address the parties' arguments with respect to secondary factors.

### III

Dembiczak also asks this court to reverse the Board's rejection of the pending claims for obviousness-type double patenting, which is a judicially-created doctrine that seeks to prevent the applicant from expanding the grant of the patent right beyond the limits prescribed in Title 35. See, e.g., *In re Braat*, 937 F.2d 589, 592, 19 USPQ2d 1289, 1291-92 (Fed. Cir. 1991); *In re Longi*, 759 F.2d 887, 892, 225 USPQ 645, 648 (Fed. Cir. 1985). See also 35 U.S.C. Section 154(a)(2) (Supp. 1998) (discussing patent term). The doctrine prohibits claims in a second patent which define "merely an obvious variation" of an invention claimed by the same inventor in an earlier patent. *Braat*, 937 F.2d at 592, 19 USPQ2d at 1292 (quoting *In re Vogel*, 422 F.2d 438, 441, 164 USPQ 619, 622 (CCPA 1970)). Thus, unless a claim sought in the later patent is patentably distinct from the claims in an earlier patent, the claim must be rejected. See *In re Goodman*, 11 F.3d 1046, 1052, 29 USPQ2d 2010, 2015 (Fed. Cir. 1993); *Vogel*, 422 F.2d at 441, 164 USPQ at 622. This question is one of law, which we review *de novo*. See *Goodman*, 11 F.3d at 1052, 29 USPQ2d at 2015; *Texas Instruments Inc. v. United States Int'l Trade Comm'n*, 988 F.2d 1165, 1179, 26 USPQ2d 1018, 1029 (Fed. Cir. 1993).

### A

[2] The law provides that, in some very rare cases, obvious-type double patenting may be found between design and utility patents. See *Carman Indus., Inc. v. Wahl*, 724 F.2d 932, 939-40, 220 USPQ 481, 487 (Fed. Cir. 1983) (noting that, while theoretically possible, "[d]ouble patenting is rare in the context of utility versus design patents"); *In re Thorington*,



418 F.2d 528, 536-37, 163 USPQ 644, 650 (CCPA 1969) (Double patenting between a design and utility patent is possible "if the features producing the novel aesthetic effect of a design patent or application are the same as those recited in the claims of a utility patent or application as producing a novel structure."); *In re Phelan*, 205 F.2d 183, 98 USPQ 156 (CCPA 1953); *In re Barber*, 81 F.2d 231, 28 USPQ 187 (CCPA 1936); *In re Hargraves*, 53 F.2d 900, 11 USPQ 240 (CCPA 1931). In these cases, a "two-way" test is applicable. See *Carman*, 724 F.2d at 940, 220 USPQ at 487. Under this test, the obviousness-type double patenting rejection is appropriate only if the claims of the two patents cross-read, meaning that "the test is whether the subject matter of the claims of the patent sought to be invalidated would have been obvious from the subject matter of the claims of the other patent, and vice versa." *Id.*, 220 USPQ at 487. See also *Braat*, 937 F.2d at 593, 19 USPQ2d at 1292 (explaining two-way test).

## B

In making its double patenting rejection, the Board concluded that all but one of the pending claims of Dembiczak's utility application would have been merely an obvious variation of the claims of the earlier-issued design patents--the Dembiczak '023 and '254 references--in light of the Holiday reference. The remaining claim, dependent claim 49, was judged obvious in light of the combination of the Dembiczak design patents, Holiday, and the Kessler reference.

[3] Acknowledging that the two-way test was required by *Carman*, 724 F.2d at 940, 220 USPQ at 487, the Board concluded that "the design claimed in each of appellants' design patents does not exclude the features pertaining to the construction and color of the bag, the use of a plastic material for making the bag, the size or thickness of the bag . . . or the use of various types of filling material . . . . The particular details of the facial indicia would have been a matter of design choice as evidenced by the Holiday handbook," and that therefore, in view of Holiday, the claims of the design patents were obvious variants of the pending utility patent claims. See *Dembiczak*, slip op. at 11. We disagree. In order for a design to be unpatentable because of obviousness, there must first be a basic design reference in the prior art, the design characteristics of which are "basically the same as the claimed design." *In re Borden*, 90 F.3d 1570, 1574, 39 USPQ2d 1524, 1526 (Fed. Cir. 1996); *In re Rosen*, 673 F.2d 388, 391, 213 USPQ 347, 350 (CCPA 1982). The phrase "having facial indicia thereon" found in the claims of the pending utility application is not a design reference that is "basically the same as the claimed design." *Borden*, 90 F.3d at 1574, 39 USPQ2d at 1526. In fact, it describes precious little with respect to design characteristics.

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The Board's suggestion that the design details were simply "a matter of design choice" evinces a misapprehension of the subject matter of design patents. *E.g.*, *Carman*, 724 F.2d at 939 n.13, 220 USPQ at 486 n.13 ("Utility patents afford protection for the mechanical structure and function of an invention whereas design patent protection concerns the ornamental or aesthetic features of a design.") Indeed, we note that the two design patents at issue here--the Dembiczak '023 and '254 patents--were considered nonobvious over each other, and were even the subject of

a restriction requirement. See 35 U.S.C. Section 121 (1994) ("If two or more independent and distinct inventions are claimed in one application, the Commissioner may require the application to be restricted to one of the inventions."); 37 C.F.R. Section 1.142. The position adopted by the Board--that a textual description of facial indicia found in the claims of the utility patent application makes obvious the specific designs claimed in the (patentably distinct) Dembiczak design patents--would presumably render obvious, or even anticipate, all design patents where a face was depicted on a bag. But this, of course, is not the law; the textual description cannot be said to be a reference "basically the same as the claimed design," of the design patents at issue here. *Borden*, 90 F.3d at 1574, 39 USPQ2d at 1526 (internal quotation marks omitted). The Board's conclusion of obviousness is incorrect.

Because we find that the Board erred in concluding that the design patents were obvious variants of the pending utility claims, we need not address the other prong of the two-way double patenting test--whether the pending utility claims are obvious variations of the subject matter claimed in the design patents. See *Carman*, 724 F.2d at 939, 220 USPQ at 487 (both prongs of the two-way test required for obviousness-type double patenting). The double patenting rejections are reversed.

#### IV

Because there is no evidence in the record of a suggestion, teaching, or motivation to combine the prior art references asserted against the pending claims, the obviousness rejections are reversed. In addition, because the Board misapprehended the test for obviousness-type double patenting, and because the pending utility claims do not render obvious the design patents, the double patenting rejections are also reversed.

**REVERSED .**

**- End of Case -**

In re Kerkhoven, 205 USPQ 1069 (CCPA 1980)

**In re Kerkhoven**

**(CCPA)  
205 USPQ 1069**

**Decided May 15, 1980**

**No. 79-586**

**U.S. Court of Customs and Patent Appeals**

**Headnotes**

**PATENTS**

**1. Patentability -- Composition of matter (§ 51.30)**

**Patentability -- Invention -- Specific cases -- Chemical (§ 51.5093)**

It is prima facie obvious to combine two compositions each of which is taught by prior art to be useful for same purpose in order to form third composition that is to be used for very same purpose; idea of combining them flows logically from their having been individually taught in prior art; thus, claims that require no more than mixing together of two conventional spray-dried detergents set forth prima facie obvious subject matter.

**2. Patentability -- Composition of matter (§ 51.30)**

**Patentability -- Evidence of -- Comparison with allowed claims or patents (§ 51.457)**

Comparative test data that is not commensurate with claims' scope offered as evidence of superiority of claimed method does not rebut prima facie case of obviousness.

**3. Patentability -- Composition of matter (§ 51.30)**

**Patentability -- Invention -- In general (§ 51.501)**

**Patentability -- Invention -- Specific cases -- Chemical (§ 51.5093)**

**Patentability -- New use or function -- Nonanalogous art (§ 51.557)**

Problem of how to introduce more than one color into detergent and problem of how to improve flow characteristics of mixed-active detergent are quite remote; mere knowledge that simultaneous spray-drying multiple slurries was useful technique in production of multi-colored detergents would not have suggested anything about effect of simultaneous spray-drying slurries having different active detergent contents, one being primarily if not exclusively anionic in nature and other being primarily if not exclusively nonionic in nature, on flow characteristics of final mixed-active product; claimed process, considered as a whole, as required by 35 U.S.C. 103, would not have been prima facie obvious to one skilled in art at time invention was made where one skilled in art working at that time on problem invention solved would not have been motivated or guided by prior art to arrive at claimed process.

**Particular patents -- Detergent**

Kerkhoven, Production of Detergent Compositions, rejection of claims 2-4, 9, and 14 affirmed; rejection of claim 5 reversed.

**Case History and Disposition:**

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Appeal from Patent and Trademark Office Board of Appeals.

Application for patent of Frederik Johan Kerkhoven, Serial No. 501,956, filed Aug. 30, 1974. From decision rejecting claims 2-5,

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9, and 14, applicant appeals. Modified; Miller, Judge, with whom Markey, Chief Judge, joins, dissenting in part with opinion.

**Attorneys:**

James J. Farrell, Edgewater, N.J., for appellant.

Joseph F. Nakamura (Gerald H. Bjorge, of counsel) for Commissioner of Patents and Trademarks.

**Judge:**

Before Markey, Chief Judge, Rich, Baldwin, and Miller, Associate Judges, and Newman, \* Judge.

## Opinion Text

### Opinion By:

Newman, Judge.

This is an appeal from the decision of the United States Patent and Trademark Office (PTO) Board of Appeals (board) sustaining the examiner's rejection under 35 USC 103 of claims 2-5, 9 and 14 of application serial No. 501,956, filed August 30, 1974, for "Production of Detergent Compositions." We modify.

## Background

### *The Invention*

Appellant claims a process for the production of particulate detergent compositions containing a mixture of anionic <sup>1</sup> and nonionic <sup>2</sup> active detergent materials. Appellant explains in his specification that the detergent-making art often prefers such detergents to achieve optimal detergent properties, and he notes that the most commonly used active detergent combination is a mixture of anionic fatty acid soaps, anionic synthetic non-soap detergents, and nonionic detergents. Detergents made from this combination of ingredients are called mixed-active detergents.

Appellant's invention is generic in the sense that it covers two separate and distinct methods of producing mixed-active particulate detergents, each method including the common step of forming at least two slurries <sup>3</sup> of detergent ingredients, the active detergent content of one slurry being primarily if not exclusively anionic in nature and the active detergent content of the other slurry being primarily if not exclusively nonionic in nature. Under one of these methods, the slurries are independently dried and the resulting products are mixed. Under the other method, the slurries are simultaneously dried and mixed.

Appealed claims 2-4, 9 and 14 are drafted broadly enough to cover both of these modes of operation. Claim 14 is illustrative:

14. A process for preparing a spray-dried detergent composition comprising by weight 5-80% of builders, 0-50% fillers and 5-60% of active detergent materials consisting essentially of a mixture of 20-80% by weight of anionic detergents of which 10-90% by weight is a fatty acid soap, and 80-20% by weight of nonionic detergents, which process comprises forming approximately equal proportions of at least two aqueous slurries A and B, slurry A being composed of a builder slurry incorporating therein an active detergent component consisting essentially of 60-100% by weight of anionic detergents and 0-40% by weight of nonionic detergents, slurry B being composed of a builder slurry incorporating therein an active detergent component consisting essentially of 0-40% by weight of anionic detergents and 60-100% by weight of nonionic detergents, treating said slurries as separate streams in at least on spray-drying equipment and collecting/mixing the dried products to form a homogeneous mixture of particulate material comprising said detergent composition.

Appealed claim 5, however, is limited to only the simultaneously dry and mix method. Claim 5 reads as follows:

5. A process according to claim 14, in which slurries A and B are spray-dried simultaneously in one spray-drying tower through separate nozzle systems, having points of entry on the tower at substantially equal height level of the tower.

According to appellant, the conventional manner of making mixed-active particulate detergents had been to mix all of the ingredients together in one slurry and then spray-dry the slurry. Appellant alleges that this single-slurry technique produces detergents having poor flow characteristics, whereas his multi-slurry methods produce detergents having excellent flow characteristics.

To prove this, appellant conducted tests comparing the flow characteristics of detergents made by these processes. The results from these tests show that mixed-ac

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tive detergents made according to both of the claimed multi-slurry methods had good flow characteristics. On the other hand, detergents comprising the same ingredients made by the above-described single-slurry process had poor flow characteristics. The tests, however, did not compare the flow characteristics of compositions containing partially prehydrated sodium tripolyphosphate builder.

### ***The Prior Art***

The PTO has cited the following references as prior art:

Coffey <sup>4</sup> describes a process for the production of mixed-active particulate detergents having good flow characteristics. Coffey uses a single slurry technique, i.e., all the ingredients are mixed together in one slurry which is then spray-dried. According to Coffey, his detergents have good flow characteristics because he includes in the slurry partially prehydrated sodium tripolyphosphate builder.

Cavataio <sup>5</sup> and Tofflemire <sup>6</sup> disclose processes for the production of multicolor particulate detergents. The multi-color effect is achieved by simultaneously spray-drying a natural colored detergent slurry and a colored detergent slurry through separate nozzles in the same spray-drying tower. In Tofflemire, the nozzles are at the same height in the tower.

Colgate <sup>7</sup> teaches mixed-active detergents having enhanced soil-suspending properties. The flow characteristics of these detergents are not discussed.

Ruff <sup>8</sup> discloses anionic spray-dried detergents and nonionic spray-dried detergents having tarnish inhibiting properties.

### ***Examiner's Rejection***

The examiner rejected all of the appealed claims under 35 USC 103 as unpatentable either over Cavataio in view of Colgate, Coffey, Ruff and Tofflemire, or over Colgate and Coffey in view of Cavataio, Ruff and Tofflemire. He explained that the claims require no more than the mixing of two conventional spray-dried detergent compositions, and concluded that the mere mixing of two compositions each taught for the same purpose, in the absence of a showing of unexpected results, is obvious. In support of this proposition, the examiner cited *In re Crockett*,

47 CCPA 1018, 279 F.2d 274, 126 USPQ 186 (1960).

The examiner determined that appellant had not demonstrated any unexpected advantage for the claimed process. He pointed out that although the claims encompass the use of prehydrated sodium tripolyphosphate builder, appellant had not shown that the product produced from his process was superior to that obtained from Coffey's process, when prehydrated sodium tripolyphosphate was used. The examiner also noted that appellant had not demonstrated that Colgate's product had poor flow characteristics.

In his original rejection, the examiner did not comment on the independent patentability of claim 5. However, in the examiner's Answer to appellant's brief before the board, the examiner acknowledged that claim 5 presented the additional issue of whether it would be obvious to spray dry the two compositions simultaneously in one tower through separate nozzles at an equal height level. The examiner concluded that this would have been obvious, reasoning:

Appellant has neither argued nor demonstrated that this method of simultaneous spray drying in a single tower provides any unexpected results. Further, this process would be suggested by the teachings in Tofflemire and appellant's admission in the sentence bridging pages 27 and 28 of his brief that "given the long standing practice of spray drying with a multiplicity of nozzles, the *possibility* of introducing separate streams to any or all of these separate nozzles would be obvious to anyone of ordinary skill in the art". [Emphasis in original.]

Appellant responded to this point in his reply brief before the board with the following:

The Examiner's arguments with respect to claim five, that applicant has

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admitted the possibility of introducing separate streams to any or all of separate nozzles as being obvious, does not relate to whether one skilled in the art would actually do such a thing without applicant's teaching. Indeed to argue the impossibility of introducing separate slurries to separate nozzles and spray drying them simultaneously would be fruitless.

Tofflemire is directed to producing a multicolored particulate detergent and has nothing to do with combining two slurries such as applicant has claimed.

### **Board's Rejection**

The board affirmed the examiner's rejection adding that in its opinion one skilled in this art, knowing that individual detergents or certain mixtures of detergents produce particles having good free-flow characteristics, would understand that the detergents desired in the final composition may be dried separately and then mixed. The board did not address the issue of the independent patentability of claim 5.

### **Appellant's Argument**

Appellant contends that there is no suggestion in the prior art to split the active detergents into two specific slurries and spray-dry them either simultaneously to obtain a final product or separately and then mix them to obtain a final product. Therefore, appellant argues, no prima

facie case of obviousness exists, and a showing of unexpected results is not required.

Appellant maintains that, as was the case in *In re Spinnoble*, 56 CCPA 823, 405 F.2d 578, 160 USPQ 237 (1969), appellant's invention here is the discovery of the source of a problem and the finding of a solution for that problem. Appellant points out that none of the cited references except Coffey recognized the problem here, and that Coffey employed a different route to solve it.

Appellant notes that claim 5 which calls for simultaneous spray-drying is even more remote from the examiner's references than the other appealed claims. Appellant submits that the process of claim 5 would not be performed by the mere mixing of two known spray-dried detergents.

### **Solicitor's Argument**

The solicitor asserts that one of ordinary skill in the art -- faced with the problem of poorly flowing mixed-active detergents prepared by spray-drying one slurry containing all detergents, and armed with the knowledge that detergent compositions do not present such difficulties if the active detergent component is not a mixture of different active detergents -- would readily understand that the detergents desired in the final composition may be dried separately and then mixed. He submits that the problem and its source were known, and that the solution thereto claimed herein would have been obvious.

In his brief, the solicitor does not address the issue of the independent patentability of claim 5. When asked to comment on the rejection of claim 5 at oral argument, the solicitor stated that the basis for the PTO's case of obviousness for claim 5 was: (1) appellant's description of the prior art before the board, wherein appellant stated that Cavataio makes detergent compositions by spray drying two detergent slurries of different chemical composition simultaneously in a tower; (2) the disclosure in Tofflemire that shows the feature of simultaneous spray-drying two slurries from the same height in a spray-drying tower; and (3) appellant's admission that simultaneous spray-drying of two detergent slurries was known.

### **Opinion**

[1] It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. *In re Susi*, 58 CCPA 1074, 1079-80, 440 F.2d 442, 445, 169 USPQ 423, 426 (1971); *In re Crockett*, 47 CCPA 1018, 1020-21, 279 F.2d 274, 276-77, 126 USPQ 186, 188 (1960). As this court explained in *Crockett*, the idea of combining them flows logically from their having been individually taught in the prior art. In the case at bar, appealed claims 2-4, 9 and 14 require no more than the mixing together of two conventional spray-dried detergents. Thus, these claims set forth prima facie obvious subject matter.

[2] The comparative test data offered by appellant as evidence of the superiority of this claimed method does not rebut the prima facie case of obviousness because it is not commensurate in scope with the claims. The claims are broad enough to cover multi-slurry-produced detergent compositions containing partially pre-hydrated sodium tripolyphosphate builder. Coffey teaches that single-slurry-produced detergent compositions containing this builder have good flow characteristics. Appellant's attorney admits that appellant has not run any tests comparing his multi-slurry-produced



detergent compositions containing this builder with Coffey's single-slurry-produced detergent compositions containing this builder. Thus, appellant has failed to prove the superiority of his multi-slurry technique over the prior art's single-slurry technique for the production of detergent compositions containing this builder. Having failed to do this, appellant has not proven the superiority of the multi-slurry technique over the single-slurry technique for all compositions covered by the claims.

### **Claim 5**

In review of this application, the board lumped claim 5 together with the rest of appellant's claims. Appellant specifically objects to this treatment -- and we agree.

Claim 5 sets forth an alternative process for making a mixed-active spray-dried particulate detergent. Whereas the other claims on appeal include in their coverage the process of merely combining a known anionic spray-dried particulate detergent with a known nonionic spray-dried particulate detergent to form a mixed-active particulate detergent product, claim 5 is limited to the process of making a mixed-active particulate detergent product by simultaneously spray-drying through separate nozzle systems in one spray-drying tower one detergent slurry, having an active detergent content of 60-100% anionic and 0-40% nonionic, and another detergent slurry having an active detergent content of 60-100% nonionic and 0-40% anionic.

Searching the references, we find no support for the PTO's prima facie case of obviousness for claim 5. Coffey, the only reference which describes a prior art method for obtaining good-flowing mixed-active particulate detergents, does not use simultaneous spray-drying, but rather teaches a single-slurry technique that requires partially pre-hydrated sodium tripolyphosphate builder.

Coffey explains that it was an object of his invention "to enable the production of satisfactory detergent compositions comprising appreciable proportions of [nonionic active detergent ingredients]." According to Coffey, "it [had] not been readily possible, [prior to Coffey's invention], to make acceptable detergent compositions in powdered or granular form incorporating appreciable quantities of [nonionic active detergent ingredients], \* \* \*, as such compositions [were] sticky and [had] poor flow properties rendering their production and packaging difficult and so making them unsatisfactory for commercial use." Coffey discloses, however, that under his invention: "Such compositions may be made with good flow properties and texture which are retained during storage, \* \* \*." The "essential feature" of Coffey's method for making satisfactory mixed-active detergent compositions is the use of partially pre-hydrated sodium tripolyphosphate builder.

Unlike Coffey's method, appellant's process (claim 5) for making a mixed active detergent with good flow characteristics does not rely on partially pre-hydrated sodium tripolyphosphate builder. Rather, appellant solves this flow problem by utilizing the technique of simultaneously spray-drying through separate nozzle systems in one spray-drying tower one detergent slurry having an active detergent content that is primarily if not exclusively anionic and another detergent slurry having an active detergent content that is primarily if not exclusively nonionic. Although simultaneous spray-drying of multiple slurries did not originate with appellant, on this record he appears to have been the first to utilize this technique with slurries having different active detergent contents, one being primarily if not exclusively anionic in nature and the other being primarily if not exclusively nonionic in nature, in order to improve the flow characteristics

of the final mixed-active product.

[3] In the past, simultaneous spray-drying of multiple slurries was limited to the production of multicolor detergents wherein the specific active detergent content of the slurries was beside the point.<sup>9</sup> We conclude that the problem of how to introduce more than one color into a detergent and the problem of how to improve the flow characteristics of a mixed-active detergent are quite remote. Mere knowledge that simultaneous spray-drying multiple slurries was a useful technique in the production of multi-colored detergents would not have suggested anything about the effect of simultaneous spray-drying slurries having different active detergent contents, one being primarily if not exclusively anionic in

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nature and the other being primarily if not exclusively nonionic in nature, on the flow characteristics of the final mixed-active product. Consequently, one skilled in this art, working at the time appellant's invention was made on the problem of how to obtain good flow characteristics in mixed-active spray-dried detergents without resort to partially pre-hydrated sodium tripolyphosphate builder, would not have been motivated or guided by the prior art to arrive at the process appellant is claiming in claim 5, that is, a process for making a mixed-active detergent wherein the flow characteristic problem is solved by resort to the simultaneous spray-drying technique heretofore only used in the production of multi-colored detergents. For this reason, we hold that the process described in claim 5, considered *as a whole* as required by 35 USC 103, would not have been prima facie obvious to one skilled in the art at the time this invention was made. Cf. *In re Spinnoble*, 56 CCPA 823, 405 F.2d 578, 160 USPQ 237 (1969); *In re Kuehl*, 475 F.2d 658, 177 USPQ 250 (CCPA 1973).

Accordingly, the decision of the board is *affirmed* with regard to claims 2-4, 9 and 14, and *reversed* as to claim 5.

*Modified.*

### Footnotes

Footnote 1. An anionic substance is one which is negatively charged.

Footnote 2. A nonionic substance is one which is electrically neutral, that is, it does not have either a positive or negative charge.

Footnote 3. A slurry is a watery mixture or suspension of insoluble matter.

Footnote 4. Canadian patent to Coffey, Griffiths, and Naylor, No. 852173, issued September 22, 1970, for "Process for the Production of Detergent Compositions."

Footnote 5. U.S. patent to Cavataio and Monick, No. 3,519,054, issued July 7, 1970, for "Process for Producing a Particulate Product."

Footnote 6. U.S. patent to Tofflemire, No. 3,357,476, issued December 12, 1967, for "Process and Apparatus for Spray Drying Multi-Colored Detergent Particles."

Footnote 7. British patent specification of Colgate-Palmolive Company, No. 931,438, published

July 17, 1963, for "Solid Detergent Composition."

Footnote 8. U.S. patent to Ruff, No. 2,861,954, issued November 25, 1958, for "Polyphosphate Compositions Containing Soap and 2-Mercaptothiazoline."

Footnote 9. Although Cavataio implies that the colored slurry could be different from the matrix slurry composition-wise, nowhere does he teach or even hint at the particular difference here claimed, i.e., that the slurries have different active detergent contents, one being primarily if not exclusively anionic in nature and the other being primarily if not exclusively nonionic in nature. In point of fact, Cavataio's only illustration of this point is an example wherein one slurry contains none of the active detergent material.

### Dissenting Opinion Text

#### Dissent By:

Miller, Judge, with whom Markey, Chief Judge, joins, dissenting in part.

I cannot agree that the rejection of claim 5, which requires simultaneous spray-drying and mixing of two conventional detergent slurries, should be reversed. The majority opinion recognizes that the motivation for one of ordinary skill in the art to mix the dried detergents together after independent spray-drying follows logically from the prior art. In *re* Susi and In *re* Crockett, both cited in the majority opinion. Nevertheless, it concludes that mixing them during—*simultaneous* spray-drying would have been beyond the level of ordinary skill in the detergent-making art, even though, as the majority opinion recognizes, simultaneous spray-drying of multiple slurries is a conventional process in that art.<sup>1</sup>

How or why such mixing would have been beyond the level of ordinary skill in the art is not explained except by the statement that there would have been no motivation therefor, because the prior art simultaneous spray-drying technique had only been used in the production of multicolored detergents. However, this position is untenable, because Cavataio et al. teach that two detergent slurries to be simultaneously spray-dried can be of *different compositions* as well as of different colors.<sup>2</sup> Thus, motivation to use *any* two conventional slurries (having different active detergent contents) in the Cavataio et al. process would have been provided one of ordinary skill in the art, and a prima facie case of obviousness is established.

The majority opinion's reversal of the rejection of claim 5 clearly relies upon its conclusion that appellant "solves this flow problem" (the "sticky and poor flow properties" of detergent compositions related by Coffey), accepting as fact that appellant's process produces detergents "with good flow characteristics." However, in affirming the rejection of all the other claims, the majority opinion does not accept appellant's "good flow characteristics" test data as sufficient to rebut a prima facie case of obviousness. Moreover, it does not necessarily follow that a product possessing nonobvious properties renders a process for making that product nonobvious. As Judge Rich explained in his concurring opinion in *In re Larsen*, 49 CCPA 711, 716-17, 292 F.2d 531, 534-36, 130 USPQ 209, 212-13 (1961):

[I]f it be the fact that the final compound AB possesses unique, unexpected, surprising, or highly useful properties, they *inhere in the product* AB, not in A alone, B alone, or in the process of reacting them. While such attributes in a product may make it, the product,

patentable they do not make the process patentable because they are in no way a part of the process. \* \* \*

There is a certain amount of logic in holding a product to be unobvious

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because of the discovery in it of unobvious properties \* \* \*. But I see neither logic nor sound interpretation of the patent law in transferring such properties from the product in which they inhere to a process of making the product in which they do not.

See *In re Hoeksema*, 51 CCPA 1474, 1478, 332 F.2d 374, 377, 141 USPQ 733, 735-36 (1964), pointing out:

In *In re Larsen* \* \* \* this court held a process to be obvious although it produced a product which, because of its unexpected properties, was unobvious.

See *In re Kuehl*, 475 F.2d 658, 665, 177 USPQ 250, 255-56 (1973), in which the unanimous opinion by Judge Roth points out that "each statutory class of claims must be considered independently on its own merits" and that "an applicant does not get such [process] claims just because the product is new and unobvious." Appellant's citation of *In re Spinnoble*, 56 CCPA 823, 405 F.2d 578, 160 USPQ 237 (1969), is not apt, because the appealed claim with a limitation directed to the solution of a problem.

Although the manufacture of detergents may involve chemical reactions in process steps, claim 5 involves merely the physical process of simultaneously spray-drying two known slurries, and there is no indication that a chemical reaction occurs in the spray-drying tower. Accordingly, the uncertainty and unpredictability often associated with the chemical arts is not present here.

With respect to appellant's claim limitation that the nozzles be located at a "substantially equal height level of the tower," Cavataio et al. disclose that the point of entry of the second liquid can be as close as 15% "below the level of the point of entry of the first liquid, the percentage based on the distance from the bottom of the spray tower to the point of entry of the first liquid." Moreover, the Tofflemire reference (U.S. Patent 3,357,476) expressly discloses the simultaneous spray drying of two different detergents (one colored, the other not colored) at the same height.

I would hold that the Patent and Trademark Office has established a prima facie case of obviousness of claim 5 and that this has not been rebutted by appellant's comparative test data, the same not being commensurate in scope with the claim, as clearly pointed out in the majority opinion.

### Footnotes

Footnote 1. The majority opinion says that appellant appears to have been the first to utilize simultaneous spray-drying with slurries having different active detergent contents, but, at oral argument, counsel for appellant stated that it made no difference whether the compositions were separately dried before mixing or simultaneously dried and mixed.

Footnote 2. Cavataio et al. state that "both the matrix and the contrasting colored liquid are in

the form of slurries which contain the necessary components for a complete detergent composition." The majority opinion offers no reason for limiting this teaching of Cavataio et al. to the specific slurry compositions used in their several examples.

Footnote \* The Honorable Bernard Newman, United States Customs Court, sitting by designation.

**- End of Case -**